IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Tienteh CHEN	§	Confirmation No.:	9905
Serial No.:	10/613,497	§	Group Art Unit:	1794
Filed:	07/02/2003	§	Examiner:	B. Shewareged
For:	Inkjet Recording Materials Containing Siloxane Copolymer Surfactants	§	Docket No.:	200309844-1

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: February 27, 2009

Sir:

Appellant hereby submits this Appeal Brief in connection with the above-identified application. A Notice of Appeal was electronically filed on January 9, 2009.

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I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, L.P. (HPDC), a Texas Limited Partnership, having its principal place of business in Houston, Texas. HPDC is a wholly owned affiliate of Hewlett-Packard Company (HPC). The Assignment from the inventor to HPDC was recorded on December 15, 2003, at Reel/Frame 014783/0706.

II. RELATED APPEALS AND INTERFERENCES

Appellant is unaware of any related appeals or interferences.

III. STATUS OF THE CLAIMS

Originally filed claims:	1-20.
Claim cancellations:	11-20.
Added claims:	None.
Presently pending claims:	1-10.
Presently appealed claims:	1-10.

IV. STATUS OF THE AMENDMENTS

No claims were amended after the final Office action dated November 17, 2008.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

This section provides a concise explanation of the subject matter defined in each of the independent claims, referring to the specification by page and line number or to the drawings by reference characters as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified with a corresponding reference to the specification or drawings where applicable. The specification references are made to the application as filed by Appellant. Note that the citation to passages in the specification or drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element. Also note that these specific references are not exclusive; there may be additional support for the subject matter elsewhere in the specification and drawings.

The invention of claim 1 is directed to a print medium comprising an ink-receiving layer and a coated paperbase.[1] The ink-receiving layer comprises at least one hydrophilic polymer, at least one cross-linking agent, at least one mordant, inorganic particles, at least one nonionic siloxane copolymer surfactant, and at least one nonsiloxane surfactant.[2] The at least one hydrophilic polymer, the at least one nonionic siloxane copolymer surfactant, and the at least one nonsiloxane surfactant are bound together.[3] The at least one nonsiloxane surfactant comprises a nonionic or anionic nonsiloxane surfactant and said layer contains a greater total amount of said nonionic siloxane copolymer surfactant than of said nonionic or anionic nonsiloxane surfactant by weight.[4] The at least one hydrophilic polymer is selected from the group consisting of polyvinyl alcohol, a copolymer of polyvinylalcohol with polyethyleneoxide, a copolymer of polyvinylalcohol with polyacrylic or maleic acid, acetoacetylated polyvinylalcohol, polyethylene oxide, hydroxyethyl cellulose, hydroxypropylmethyl cellulose, poly(N-ethyl-2-oxazoline), casein, starch, agar, carrageenan, cellulose,

[1] Fig. 1; pg. 3, lines 12–14, para. [0006] of the specification.

[2] pg. 4, lines 9–12, para. [0011] of the specification.

[3] pg. 7, lines 10–12, para. [0016] of the specification.

carboxymethyl cellulose, dextran, pullulan, gelatin, derivatives thereof, and mixtures thereof.[5]

The invention of claim 6 is directed to a print medium comprising an ink-receiving layer and a coated paperbase.[6] The ink-receiving layer comprises at least one hydrophilic polymer, at least one cross-linking agent, at least one mordant, inorganic particles, at least one nonionic siloxane copolymer surfactant, and at least one nonsiloxane surfactant.[7] The at least one nonsiloxane surfactant comprises a nonionic or anionic nonsiloxane surfactant and said layer contains a greater total amount of said nonionic siloxane copolymer surfactant than of said nonionic or anionic nonsiloxane surfactant by weight.[8] The at least one hydrophilic polymer is selected from the group consisting of polyvinyl alcohol, a copolymer of polyvinylalcohol with polyethyleneoxide, a copolymer of polyvinylalcohol with polyacrylic or maleic acid, acetoacetylated polyvinylalcohol, polyethylene oxide, hydroxyethyl cellulose, hydroxypropylmethyl cellulose, poly(N-ethyl-2-oxazoline), casein, starch, agar, carrageenan, cellulose, carboxymethyl cellulose, dextran, pullulan, gelatin, derivatives thereof, and mixtures thereof.[9] The at least one nonionic siloxane copolymer surfactant is from about 0.05–2 weight percent of the total weight of the ink-receiving layer.[10]

The invention of claim 8 is directed to a print medium comprising an ink-receiving layer and a coated paperbase.[11] The ink-receiving layer consists of at least one hydrophilic polymer, at least one cross-linking agent, at least one mordant, inorganic particles, at least one nonionic siloxane copolymer surfactant,

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[4] pg. 6, lines 17–20, para. [0015] of the specification.

[5] pg. 7, lines 13–22, para. [0016] of the specification.

[6] Fig. 1; pg. 3, lines 12–13, para. [0006] of the specification.

[7] pg. 4, lines 9–12, para. [0011] of the specification.

[8] pg. 6, lines 19–20, para. [0015] of the specification.

[9] pg. 7, lines 13–22, para. [0016] of the specification.

[10] pg. 6, lines 8–10, para. [0014] of the specification.

[11] Fig. 1; pg. 3, lines 12–13, para. [0006] of the specification.

and at least one nonsiloxane surfactant.[12] The at least one hydrophilic polymer, the at least one nonionic siloxane copolymer surfactant, and the at least one nonsiloxane surfactant are bound together.[13] The at least one nonsiloxane surfactant comprises a nonionic or anionic nonsiloxane surfactant and said layer contains a greater total amount of said nonionic siloxane copolymer surfactant than of said nonionic or anionic nonsiloxane surfactant by weight.[14] The at least one hydrophilic polymer is selected from the group consisting of polyvinyl alcohol, a copolymer of polyvinylalcohol with polyethyleneoxide, a copolymer of polyvinylalcohol with polyacrylic or maleic acid, acetoacetylated polyvinylalcohol, polyethylene oxide, hydroxyethyl cellulose, hydroxypropylmethyl cellulose, poly(N-ethyl-2-oxazoline), casein, starch, agar, carrageenan, cellulose, carboxymethyl cellulose, dextran, pullulan, gelatin, derivatives thereof, and mixtures thereof.[15]

[12] pg. 4, lines 9–12, para. [0011] of the specification.

[13] pg. 7, lines 10–12, para. [0016] of the specification.

[14] pg. 6, lines 19–20, para. [0015] of the specification.

[15] pg. 7, lines 13–22, para. [0016] of the specification.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1–10 are obvious over Sismondi et al. (U.S. Pat. No. 6,387,473, hereinafter "*Sismondi*") in view of Miller (U.S. Pat. App. Pub. No. 2002/0142141, hereinafter "*Miller*").

VII. ARGUMENT

A. Overview of *Sismondi*

Sismondi is directed to an ink jet receiving sheet comprising a support and at least two ink receiving layers on the support.[16] The support is any conventional support for an ink jet receiving sheet.[17] The ink receiving layer farthest from the support comprises a first non-ionic surfactant having a dynamic surface tension ≤ 27 dyne/cm^2, and the underlying ink receiving layer(s) comprise(s) a second non-ionic surfactant having a dynamic surface tension ≥ 30 dyne/cm^2.[18] Non-ionic surfactants having the requisite dynamic surface tension values can be selected from non-ionic hydrocarbon surfactants and non-ionic fluorinated surfactants.[19] The coating compositions for preparing the ink receiving layers may also include binder, mordants, fillers, matting agents, hardeners, plasticizer, and the like.[20] In addition to the above-mentioned non-ionic surfactants, "additional surfactants" such as anionic surfactants, amphoteric surfactants and cationic surfactants may be included in the layers.[21] The ink receiving layer may also contain a glossiness improving agent represented by monosaccharides and/or oligosaccharides and/or C5 or C6 polysaccharides.[22] The resulting ink jet receiving sheet of *Sismondi* provides minimum bleed, no mottle and good glossiness.[23]

B. Overview of *Miller*

Miller is directed to an image receptor sheet with ink jet receptor layers that encourage rapid liquid ink absorption yet limit diffusion of ink droplets within

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[16] Abstract; col. 3, lines 13–15 and 20–30 of *Sismondi*.

[17] col. 4, lines 30–32 of *Sismondi*.

[18] col. 3, lines 20–30 of *Sismondi*.

[19] col. 3, lines 32–35 of *Sismondi*.

[20] col. 5, lines 55–62; col. 7, lines 11 and 62–63; col. 8, lines 62–63 of *Sismondi*.

[21] col. 7, lines 43–61 of *Sismondi*.

[22] col. 6, lines 49–53 of *Sismondi*.

[23] col. 3, lines 7–8 of *Sismondi*.

the layer[24] and provide scuff resistance and increased durability.[25] The reaction of multifunctional aziridine crosslinking agents with protonated pyridine functionality offers durable receptor layers that, in addition, possess the properties of a mordant. Also, this crosslinking system provides water resistant receptor layers retaining images that lose relatively little density when soaked in water. The layers also show extremely good high humidity bleed performance.[26] Optional components to improve handling and sheet feeding characteristics include plasticizers, surfactants and fillers.[27] Surfactants that may be added to aid the coating of receptor layers include, among others, polydimethylsiloxane derivatives, such as SILWET L-7605.[28] *Miller's* product has ink receptor layers that also provide scuff resistance and increased durability.[29]

C. Claims 1–10

Claim 1 is representative of independent claims 6 and 8. In rejecting claim 1, the Examiner takes the position that it would have been obvious to a person of ordinary skill in the art to combine the siloxane surfactant of *Miller* with the invention of *Sismondi*, and the motivation would be, as *Miller* suggests, improving handling and sheet feeding characteristics.[30] In response to the Appellant's previous argument,[31] the Examiner states that he did not try to replace the "additional surfactant" of *Sismondi* (col. 7, lines 43–61) with the siloxane surfactant of *Miller* (para. [0049] of *Miller*). Instead the "non-ionic surfactant" of *Sismondi* (col. 3, line 31–col. 4, line 29) was replaced with *Miller's* SILWET L-7605 surfactant. The rationale for such combination was the alleged motivation, "as suggested by *Miller,* improving handling and sheet feeding

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[24] pg. 3, para. [0037] of *Miller*.

[25] pg. 3, para. [0038] of *Miller*.

[26] pgs. 3–4, para. [0040] of *Miller*.

[27] pg. 5, para. [0049] of *Miller*.

[28] *ibid*.

[29] pg. 3, para. [0038] of *Miller*.

[30] pg. 3, para. 5, Office Action of November 17, 2008.

[31] para. spanning pgs. 7–8 of the Appellant's Response to Office Action Dated May 2, 2008.

characteristics."[32] As to the relative amounts of siloxane and non-siloxane surfactant required in claim 1, the Examiner takes the position that one of ordinary skill in the art would have been motivated to adjust the relative amount of the nonionic siloxane surfactant and the non-siloxane surfactant, and the motivation would be to control surface tension, wetting properties and glossiness of the layer.[33]

Appellant contends that the reasons articulated by the Examiner for the proposed combination of *Sismondi* and *Miller* lack a sufficient rational underpinning to support a legal conclusion of obviousness.

No Reasonable Expectation of Success

The Examiner's rationale for modifying *Sismondi* with the surfactant of *Miller* fails to explain why a person of skill in the art would have had a reasonable expectation of success in achieving the print medium of claim 1 if the proposed substitution were made. *Miller* would have tended to lead one of ordinary skill in the art away from replacing the "first surfactants" in *Sismondi* outermost layer because *Miller's* siloxane surfactant is taught as an optional additive for the purpose of improved handling and sheet feeding, or, more specifically, to aid the coating of receptor layers.[34] Notably, the primary component of *Miller's* ink receiving layer is not a surfactant but a certain cross-linked polymer (*e.g.*, multi-functional aziridine crosslinked polyvinylpyridine polymer).[35] In contrast, the hydrocarbon and fluorinated surfactants appear to be key components of the outermost and sub-layers of *Sismondi's* ink receiving sheet. Appellant contends that if one of ordinary skill in the art were attempting to improve the sheet handling and feeding properties of *Sismondi's* ink receiving sheet, that person would more likely have been prompted to try adding siloxane to one or more of

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[32] pg. 3, para. [0038] of *Miller*.

[33] pg. 3, para. 7 and pg. 4, Response to Arguments, lines 11–13 of para. 8, Office Action of November 17, 2008.

[34] pg. 5, para. [0049] of *Miller*.

[35] pg. 2, para. [0017] of *Miller*.

the existing layer formulations of *Sismondi* rather than completely replacing *Sismondi's* outer layer, as suggested by the Examiner.

If the siloxane of *Miller* were used to entirely replace the "first surfactant" in the invention of *Sismondi*, the skilled person would have needed to first experiment to determine whether, and in what amount, the substitution of siloxane would accomplish the goal of improving handling, sheet feeding and coating properties. Only after those determinations were made could the skilled person then begin to try to adjust the various other components of the modified version of *Sismondi's* ink receptor sheet to ensure *Sismondi's* requisite qualities. The modified invention of *Sismondi* would still require, in addition to the stated surfactant distributions and surface tensions,[36] minimum bleed, no mottle and good glossiness.[37] Such experimentation and adjustments would have gone beyond routine optimization.

Even if, *arguendo*, the skilled person were motivated to try to combine a siloxane surfactant of *Miller* with the invention of *Sismondi* "in order to improve handling and sheet feeding characteristics,"[38] and were then motivated "to adjust the relative amount of the nonionic siloxane surfactant and the nonsiloxane surfactant ... to control surface tension, wetting properties and glossiness of the layer,"[39] as suggested by the Examiner, there would have been no reasonable expectation that the resulting modified ink-receiving layer would chemically and/or physically interact with inkjet ink, in use, to provide *Sismondi's* required properties of minimum bleed and no mottle. Moreover, the skilled person would have had no reasonable expectation that the resulting optimized and adjusted ink receptor sheet would have the same relative amounts of siloxane and nonsiloxane surfactants as specified in claim 1.

The Examiner's rationale does not take into account the chemical differences between the surfactants of *Sismondi* and those of *Miller*. Due to the

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[36] col. 3, lines 20–30 of *Sismondi*.

[37] Abstract; col. 3, lines 7–8 of *Sismondi*.

[38] pg. 3, para. 5, Office Action of November 17, 2008.

underlying chemical differences between siloxanes (*i.e.*, Si-O-Si-O backbone) and the exemplary hydrocarbons and fluoronated compounds (*i.e.*, C-C backbone) of *Sismondi*, the results of the Examiner's proposed modification of *Sismondi* would have been unpredictable. This is particularly true since the modified version of *Sismondi* would still impose the same strict distribution among the different layers and the corresponding surface tension requirements, as described above.[40] Appellant contends that a skilled person would have questioned whether a siloxane of *Miller* could successfully replace the hydrocarbon and fluorinated surfactants of *Sismondi* in the outermost layer. The skilled person would have been uncertain about whether the suggested changes to the outermost layer would also necessitate changes to the existing second ink receiving layer and to the second non-ionic surfactant of *Sismondi's* modified sheet. Appellant contends that the resolution of those questions and uncertainties would have required an undue amount of experimentation. Thus, one of ordinary skill in the art would have had insufficient basis for forming a reasonable expectation as to whether the invention of *Sismondi* could be successfully modified by *Miller* as proposed by the Examiner.

Modification Changes the Principle of Operation of *Sismondi*

The Examiner's rejection of claim 1 is also in error because the proposed modification of *Sismondi* would change the principle of operation of the primary reference, *Sismondi*. The MPEP 2143.01 VI. provides that "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). In the present case, *Miller* teaches an image receiving layer that contains a specific crosslinked polymer and may also include swellable polymers, particulates, mordants, fillers and the like.[41]

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[39] pg. 3, para. 7, Office Action of November 17, 2008.

[40] col. 3, lines 20–30 of *Sismondi*.

[41] pg. 2, para. [0017] of *Miller*.

According to *Miller*, one type of optional additive to aid the coating of receptor layers is polydimethylsiloxane derivatives such as SILWET L-7605.[42] Clearly, *Miller* considers the optional siloxane component secondary to the special type of crosslinked polymer that is required in the ink-receiving layer. In contrast, *Sismondi*'s invention depends on a selective distribution of certain kinds of non-ionic surfactants having a specific value of dynamic surface tension. The non-ionic surfactants are distributed among an outer layer and one or more sub-layers. The outermost ink receiving layer contains a first non-ionic surfactant with dynamic surface tension of ≤ 27 dyne/cm^2, and one or more other layers containing a second non-ionic surfactant with dynamic surface tension ≥ 30 dyne/cm^2.[43] The non-ionic surfactants required in the outermost ink-receiving layer of *Sismondi* are exemplified by non-ionic hydrocarbon surfactants and fluorinated surfactants.[44] If *Miller's* nonionic or cationic siloxane were substituted for the non-ionic surfactants of *Sismondi* in the outermost ink-receiving layer, in accordance with the Examiner's suggestion, the basic technical principles under which the different ink-receiving layers of *Sismondi's* invention were designed to operate would be fundamentally changed.

If the non-ionic surfactants meeting *Sismondi's* specific criteria were taken away from the outermost layer and replaced with a siloxane surfactant of *Miller*, the modified ink-receiving layer would be chemically different than the original composition of *Sismondi*. For instance, siloxane molecules have a Si-O-Si-O backbone would be present in the modified layer, while the original hydrocarbons having a C-C backbone would be absent. This constitutes a fundamental change the chemical basis of how the surfactant interacts with the other components of the resulting ink receiving layer, and how the resulting ink-receiving layer would chemically and physically interact with ink-jet ink, to provide the respective qualities as described by *Sismondi* and *Miller*. *Miller* offers an example of how

[42] pg. 5, line 8 et seq. in para. [0049], of *Miller*.

[43] col. 3, lines 20–30 of *Sismondi*.

[44] col. 3, lines 31–col. 4, line 16 of *Sismondi*.

chemical differences in the composition of an ink receptor layer can significantly change the functionality of the product. In *Miller*, the presence of cationic sites on crosslinked polymers with (protonated pyridine functionality) in receptor layers contributes to increased mordanting of dyes and less bleeding of recorded images. This benefit is not obtainable, according to *Miller*, with polymers crosslinked via reaction of multifunctional aziridines and carboxylic acid functionality.[45]

Aside from their respective surfactant properties, the additional siloxane surfactant of *Miller* and the hydrocarbon/fluorinated surfactants of *Sismondi* would have been expected by one of skill in the art to have differing chemical and physical properties. *Sismondi*'s basic technical principle under which the ink-receptive sheet was designed to operate requires the selective combination of two surfactant types, one of which promotes spreading on the top layer surface and the other of which restrains ink diffusion inside the sub-layer. This allows improved pigment covering level on the surface of the inkjet receiving sheet, to remove mottle defects and to maintain a low bleeding level while giving a good image quality.[46] Given that *Miller*'s siloxanes are merely used to aid the coating of receptor layers,[47] and are chemically different compounds than those disclosed by *Sismondi*, one of ordinary skill in the art would not have considered it obvious to chemically reformulate the outermost ink-receptive layer of *Sismondi* in the manner suggested by the Examiner. Moreover, because chemical makeup of only the outermost layer of *Sismondi* is modified, according to the Examiner, the skilled person would have been uncertain as to how the required second layer(s) and second (ionic or amphoteric) surfactants of *Sismondi's* ink-receptive sheet[48] might be affected by the proposed chemical modification of the outermost layer.

Based on the foregoing, Appellant respectfully submits that the rejections of the claims in this grouping should be reversed, and the claims set for issue.

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[45] pgs. 3–4, paras. [0040] and [0042] of *Miller*.

[46] col. 12, lines 47–53 of *Sismondi*.

[47] pg. 5, line 8 et seq. in para. [0049] of *Sismondi*.

D. Conclusion

For the reasons stated above, Appellant respectfully submits that the Examiner erred in rejecting all pending claims. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,

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[48] col. 7, lines 43–61 of *Sismondi*.

VIII. CLAIMS APPENDIX

1. (Previously presented) A print medium comprising an ink-receiving layer and a coated paperbase, the ink-receiving layer comprising

at least one hydrophilic polymer,

at least one cross-linking agent,

at least one mordant,

inorganic particles,

at least one nonionic siloxane copolymer surfactant, and

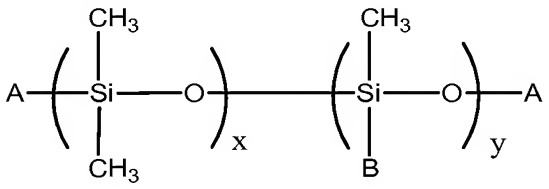
at least one nonsiloxane surfactant,

wherein the at least one hydrophilic polymer, the at least one nonionic siloxane copolymer surfactant, and the at least one nonsiloxane surfactant are bound together,

wherein said at least one nonsiloxane surfactant comprises a nonionic or anionic nonsiloxane surfactant and said layer contains a greater total amount of said nonionic siloxane copolymer surfactant than of said nonionic or anionic nonsiloxane surfactant by weight, and

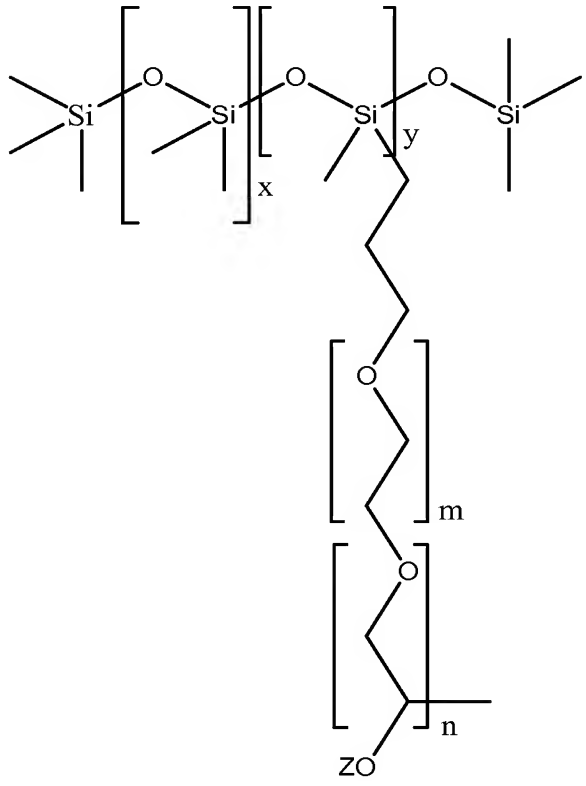
wherein the at least one hydrophilic polymer is selected from the group consisting of polyvinyl alcohol, a copolymer of polyvinylalcohol with polyethyleneoxide, a copolymer of polyvinylalcohol with polyacrylic or maleic acid, acetoacetylated polyvinylalcohol, polyethylene oxide, hydroxyethyl cellulose, hydroxypropylmethyl cellulose, poly(N-ethyl-2-oxazoline), casein, starch, agar, carrageenan, cellulose, carboxymethyl cellulose, dextran, pullulan, gelatin, derivatives thereof, and mixtures thereof.

2. (Previously presented) The print medium of claim 1, wherein the at least one nonionic siloxane copolymer surfactant comprises the following structure:



wherein A is $-CH_3$ or B, and B is a C_1 to C_{10} straight chain or branched primary or secondary hydroxy terminated alkylene group, and x and y are such as to provide a molecular weight greater than about 1000.

3. (Previously presented) The print medium of claim 1, wherein the at least one nonionic siloxane copolymer surfactant comprises the following structure:



wherein m, n, x , and y are such as to provide a molecular weight greater than about 1000, wherein Z is H, $-CH_3$, or a C_1 to C_{10} straight chain or branched primary or secondary hydroxy terminated alkylene group, and wherein the structure contains at least one polyethyleneoxide group.

4. (Previously presented) The print medium of claim 1, wherein the surface tension of the at least one nonionic siloxane copolymer surfactant is from about 20 dyne/cm to about 35 dyne/cm.

5. (Previously presented) The print medium of claim 1, wherein the hydrophilic/hydrophobic balance value (HLB) of the at least one nonionic siloxane copolymer surfactant is from about 10 to about 30.

6. (Previously presented) A print medium comprising an ink-receiving layer and a coated paperbase, the ink-receiving layer comprising

at least one hydrophilic polymer,

at least one cross-linking agent,

at least one mordant,

inorganic particles,

at least one nonionic siloxane copolymer surfactant, and

at least one nonsiloxane surfactant,

wherein the at least one hydrophilic polymer is selected from the group consisting of polyvinyl alcohol, a copolymer of polyvinylalcohol with polyethyleneoxide, a copolymer of polyvinylalcohol with polyacrylic or maleic acid, acetoacetylated polyvinylalcohol, polyethylene oxide, hydroxyethyl cellulose, hydroxypropylmethyl cellulose, poly(N-ethyl-2-oxazoline), casein, starch, agar, carrageenan, cellulose, carboxymethyl cellulose, dextran, pullulan, gelatin, derivatives thereof, and mixtures thereof,

wherein said at least one nonsiloxane surfactant comprises a nonionic or anionic nonsiloxane surfactant and said layer contains a greater total amount of said nonionic siloxane copolymer surfactant than of said nonionic or anionic nonsiloxane surfactant by weight, and

wherein the at least one nonionic siloxane copolymer surfactant is present at from about 0.05 weight percent of a total weight of the ink-receiving layer to about 2 weight percent of the total weight of the ink-receiving layer.

7. (Previously presented) The print medium of claim 1, wherein the at least one nonionic siloxane copolymer surfactant has a molecular weight of greater than about 1000.

8. (Previously presented) A print medium comprising an ink-receiving layer and a coated paperbase, the ink-receiving layer consisting of

at least one hydrophilic polymer,

at least one cross-linking agent,

at least one mordant,

inorganic particles,

at least one nonionic siloxane copolymer surfactant, and

at least one nonsiloxane surfactant,

wherein the at least one hydrophilic polymer, the at least one nonionic siloxane copolymer surfactant, and the at least one nonsiloxane surfactant are bound together,

wherein the at least one hydrophilic polymer is selected from the group consisting of polyvinyl alcohol, a copolymer of polyvinylalcohol with polyethyleneoxide, a copolymer of polyvinylalcohol with polyacrylic or maleic acid, acetoacetylated polyvinylalcohol, polyethylene oxide, hydroxyethyl cellulose, hydroxypropylmethyl cellulose, poly(N-ethyl-2-oxazoline), casein, starch, agar, carrageenan, cellulose, carboxymethyl cellulose, dextran, pullulan, gelatin, derivatives thereof, and mixtures thereof, and

wherein the at least one nonsiloxane surfactant comprises a nonionic or anionic nonsiloxane surfactant, and wherein the nonionic or anionic nonsiloxane surfactant is present in said layer in a concentration that is less than the concentration of the at least one nonionic siloxane copolymer surfactant present in the ink-receiving layer.

9. (Previously presented) The print medium of claim 1, wherein the at least one nonionic siloxane copolymer surfactant comprises at least one polysiloxane-polyethylene oxide compound or at least one polysiloxane-polyethylene oxide-polypropylene oxide compound.

10. (Original) The print medium of claim 1, wherein the coated paperbase comprises a coated paper, a cast-coated paper, or a commercial offset paper.

11–20. (Canceled).

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.